bandwidth allocation scheduler in accordance with the present invention comprises a set of program segments that provides fast, deterministic real-time scheduling for the allocation of bandwidth for file transmissions. It allows the bandwidth allocated to a delivery to vary according to the amount of bandwidth available. A different amount of bandwidth may be allocated to each individual file transmission task. Higher priority transmissions may be allocated bandwidth before allocation to lower priority file transmissions. The maximum bit rate of the slowest addressed receiver may be considered in allocating the bandwidth. Moreover, the customer can choose between different allocation strategies. Thus, the bandwidth allocation scheduler in accordance with the present invention reduces waste in bandwidth in media delivery, which in turn reduces costs for a customer.

Please amend the paragraph at p. 1, line 8 to the following:

Figure 1 illustrates a conventional satellite communications network 100 which is used to transmit data from a terrestrial sender 110, located at the "central site" 102, via the satellite 118 to a number of receivers 112-116 at "remote sites" 104-108. The transmitted data may be binary encoded files or some other file format. The network 100 includes the central site 102, the associated satellite transponder 110, the satellite 118, and the remote sites 104, 106, 108, with their respective receivers 112, 114, 116. Only three remote sites are shown in Figure 1, however, a typical satellite communications network may transmit data to thousands of receivers. A customer of the network 100 purchases a certain amount of bandwidth on the satellite transponder 110, typically for extended periods of time. E.g., a customer might lease bandwidth in the amount of 10 Mega bits per second (Mbps) on a transponder with a total capacity of 36 Mbps, for one or several months at a time.

Please amend the paragraph at p. 1, line 17 to the following:

Typically, a customer will transmit files from his/her central site 102 to one, some, or all remote sites 104-108, as soon as the file is available for transmission, and typically, all file transmissions are made at a fixed bandwidth. The bandwidth setting can be limited from above, by (A) the remaining available bandwidth on the transponder 110, given that on some systems, more than one file can be transmitted simultaneously from one transponder to (typically) disjunct sets of receivers, by (B) the maximum receive bit rate of the slowest receivers 112-116 addressed by the file transmission in question and by (C), maximum encoding rates of forward error correction equipment. The bandwidth setting for any one file transmission may also have to be limited from below, because most files have a Latest Delivery Time (LTD), i.e., the deadline by which the customer wants the file received correctly by all addressed remote sites. Missing that deadline would imply financial loss to the customer, and may make a file transmission obsolete. However, setting the bandwidth for all file transmission slow enough to accommodate the slowest receiver addressed by a particular transmission, will often place an unnecessarily restrictive upper limit on the bandwidth from many other file transmissions, which may not address the slowest receiver in the first transmission.

Please amend the paragraph at p. 6, lines 14 to the following:

Figures 2A and 2B illustrate a preferred embodiment of a network in accordance with a method and system of the present invention. As illustrated in Figure 2A, the network 200 comprises a central site 202 and remote sites 204. At the central site 202 is a satellite transponder 210 which transmits data to the satellite 208 for delivery to all addressed receivers 206. Each receiver 206 has its own maximum bit transfer rate. For example, the central site 202 may be the headquarters for a retail chain while the remote sites 204 are the retail stores located

around the world. The retail chain is thus the customer of the network 200, purchasing a certain amount of bandwidth on the satellite transponder 210. As illustrated in Figure 2B, the central site 202 comprises a server 212, which further comprises a software called Uplink 214, which manages file transmissions via the satellite transponder 210. Uplink 214 includes an Uplink Bandwidth Scheduler 216 (UBS). The UBS 216 is a set of program segments, or functions, that is invoked by Uplink 214 for fast, deterministic real-time scheduling for the allocation of bandwidth for file transmissions. The UBS 216 allocates bandwidth based upon the total available bandwidth available for file transmissions, the allocation strategy indicated by the customer, the delivery deadline of each file, and the sizes of the files waiting for transmission. Uplink 214 obtains necessary system configuration parameters and other information needed for bandwidth allocation from database tables 218.

A4 Cont.

Please amend the paragraph at p. 7, line 14 to the following:

(1) The total available bandwidth of the satellite transponder 210 used for file transmissions must be shared with bandwidth allocations for live video streams (LVS). In the preferred embodiment, LVS jobs are given higher priority than file transmissions.

A5

Please amend the paragraph at p. 15, line 21 to the following:

Under the Maximum Possible Bandwidth strategy, the Allocation Request function begins with the highest bandwidth for the GSF, *BW(0)*. For this bandwidth, the transmission lasts from *X(0)* to *t(0)*. However, during this time period, the available bandwidth drops below *BW(0)* at *X(1)* and *X(5)*, both before the transmission would end at *t(0)*. Thus, *BW(0)* cannot be allocated to the file transmission task.

A6